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THE NEW ZEALAND ENTOMOLOGIST

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THE JOURNAL OF THE ENTOMOLOGICAL SOCIETY OF NEW ZEALAND.

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Editor's Preface

This publication is the result of a decision made at the first Annual Conference of the Entomological Society of New Zealand held at Nelson in May, 1952. During this conference it was decided that the Society should publish annually a journal containing notes which would not be suitable for publication in established journals in this country, yet which constitute news of entomological interest and value. It is unfortunate that present day costs of publication have made it necessary to withhold several notes submitted, but we are fortunate in that the standard of material retained (and printed) has made the duty of editorship a light one.

The Society aims to improve and initiate relationships between entomologists, and to assist those commencing the observation and study of insects. It is hoped that the amateur and professional may be brought closer together and that the various aspects of entomological study will be better correlated one with the other as a result of our activities.

It is pleasing to be able to report that the Society now has a nucleus library in several books by the late G. V. Hudson, including his monumental work on the New Zealand Lepidoptera. These publications, which may be obtained on loan by application to the Editor, were a generous donation by Dr. Frank Hudson of Nelson.

B. B. GIVEN,
Entomological Research Station,
Nelson.

A RARE NEW ZEALAND SPECIES OF DIPTERA

A male **Sciodocera rufomaculata** White (Diptera: Phoridae) was captured on the banks of a small tributary of the Oakley Creek at Avondale on 4:1:1950.

Fuller (Proc. Linn. Soc. N.S.W. 59:9:1934) describes the early stages of this fly and Tonnoir (Rec. Cant. Mus. 3, 1, 31-38, 1926) re-describes the adult fully and records the capture of a pair from the Waitakere Ranges in 1923. These two specimens are in the Canterbury Museum and appear to be the only ones ever taken in New Zealand apart from the Avondale specimen. This is now in the collection of the Plant Diseases Division. Tonnoir discusses fully the systematic position of this most interesting and primitive species. It is one of the few instances of a species of Diptera being apparently endemic to both Australia and New Zealand.

Although the latest specimen was captured in a thickly populated suburb of Auckland there is no reason to consider that the species is one that has been introduced through the agency of man. The Avondale locality is a minute remnant of native bush. Twenty years ago virgin bush was present in the area but this has been destroyed and is replaced by secondary native flora. Tree ferns are abundant and the habitat is thus identical to those where Tonnoir netted his specimens both in Australia and New Zealand.

ROY A. HARRISON,
P.D.D., Auckland,
15/7/51.

NOTE ON THE OCCURRENCE OF *Parectopa miniella* Feld. (Lep. Tinaeidae)

Both Hudson and Meyrick have described this species as the most beautifully coloured insect in New Zealand and have given its habitat as dense swampy forest. The localities where it has been collected are Kaeo, Hamilton, Taranaki, Palmerston North and Wellington. Specimens have now been taken on the eastern side of the Waitakere Range near Auckland.

On the 18th February 1951, Mr. G. Hard of Auckland collected three specimens and saw three or four others, amongst undergrowth mainly comprised of the fern **Blechnum procerum** beside the Swanson Stream near the Peripatis Track. The bush here is fairly advanced secondary growth and is not very dense although it is thicker about the stream. It is very wet but the grade is sufficient to exclude any swampy conditions.

Mr. Hard and I wanted some more specimens of this insect and chose to collect on a stream in Sharp's Bush at the head of the Henderson Valley on the 4th March, 1951. We were fortunate in gaining one more specimen which was found resting on a leaf of **Blechnum procerum** overhanging the stream, the dark green of the leaf showing up the brilliant red and yellow colouring of the moth to advantage. This area is about two miles south of the Swanson Stream. The bush is not dense and the stream is clean and medium fast running. It is thus apparent that **P. miniella** is not confined to dense swampy forests.

K. J. WISE,
P.D.D., Auckland,
28/8/51.

NEW ZEALAND GROWN PINUS AND INSECT ATTACK.

Since 1945, when it became obvious that pine timber would be utilised on an ever increasing scale in buildings in New Zealand, there has been a great deal of argument as to whether or not such timber was subject to attack by wood-destroying insects. It it hoped that publishing of these notes will lead to further records in the Journal of the New Zealand Entomological Society. Those who are interested in utilisation of service timbers will realise that the matter is one of importance in considering the question whether or not Pinus should be treated to prevent borer attack. The following notes were all made by the writer since 1941 of buildings, etc. inspected by himself, and each record refers to a separate building or series of timber; where, however, sheds or other outhouses on one section were disconnected from the main buildings, such were recorded as separate infestations. Age of timber was based on the statements of owners or millers concerned.

Anobium species were recorded on 45 occasions from both North and South Islands. Of these, 11 were of damage to timber reported to be less than 10 years old since milling, and of the eleven, 3 were reported to be less than 5 years old. Of the remaining 34 records, 15 were of damage to timber less than 15 years old, and the remainder over 18 years of age. Of all buildings over 20 years old built either completely or in part of Pinus, approximately 70% showed **Anobium** damage. On the other hand there were complete houses or parts of buildings reported to be 40 or more years old, and they had no signs of **Anobium** presence and were clean and white on unpainted surfaces.

The opinion that timber cut from old trees is resistant to **Anobium** is negated by the two following records, both of which were checked by the writer. One is of **radiata** trees planted in 1887, milled in 1928 at an age of 41 years; the timber (used in sheds) was moderately infested by 1941 at an age of 13 years

from milling, and by January 1952, 75% was severely damaged and some of it structurally unsound at an age of 24 years from milling; 25% was clean and free from insect and fungal attack. The other record is of timber cut from 50-year-old **radiata** trees and used in a dwelling built in 1928; by 1947 (after 19 years) part of the building had to be replaced due to **Anobium** damage, but the remainder showed no attack.

Torostoma apicale Broun was recorded three times and **Ambeodontus tristis F.** on two occasions; both insects were in sound timber.

Termites: **Calotermes brouni** Frogg. was recorded on 13 occasions from sound milled Pinus and 141 times from the dead wood in living **radiata** trees.

The introduced Australian termites **Coptotermes acinaciformis** Frogg., **C. frenchi** Hill and **C. lacteus** Frogg., all occurred in Auckland, New Plymouth or Gisborne in living Pines, and the first two of these species were recorded from service timbers in Auckland on 7 occasions. Though these Australian termites are localised in occurrence, it should be remembered that Auckland is the largest utiliser of timber in New Zealand.

The above records are all of live adults or larvae in tunnels typical of the insects concerned.

J. M. KELSEY,
E.R.S., Ashburton,
11/2/52.

NOTE ON THE OCCURRENCE OF NEMATODES IN LARVAE OF *Odontria zealandica* White.

Second and third instar **Odontria** larvae collected from a locality near Methven at various times since 1945 have, in a number of cases contained larval nematodes of a hairworm type. The percentage infection has ranged from 4.3% for grubs collected in October to 12.5% for those collected in April.

Specimens of the larval nematodes were submitted to Dr. H. A. Baylis of the British Museum who referred them to the genus **Mermis,** sens. lat. This genus belongs to the family **Mermithidae** Brau 1883, the larvae of which are partly parasitic in the body cavity of Arthropods (chiefly insects) or Mollusca.

In the majority of cases the parasitised grub contained one nematode coiled within the body cavity from the thorax to the terminal abdominal segments. Small numbers of grubs contained two and rarely three nematodes. The nematodes do not appear to have any harmful effects on the grub up to the time at which the

parasite emerges. Infected larvae held in soil continue normal development until the nematodes emerged, at which point the grubs die.

It has not been possible to obtain a specific identification of the nematode involved as the larvae spend a period, up to two years, in the soil after emerging from their host before maturing. Four specimens measured for length were 29, 22, 14, and 11 cms., the latter pair were broader in relation to their length and it is not known if these are the same or a different species of the same genus.

J. M. HOY,
E.R.S., Ashburton,
11/2/52.

SLUG CONTROL.

Numerous requests from farmers over the past two years resulted in laboratory tests being carried out to find an economical control for slugs attacking cereals (especially in young stages), other crops and pasture. Since the main damage was to germinating wheat, this was used throughout tests. Materials used were Metaldehyde, Paris green, copper sulphate, copper-oxy-chloride, Ceresan, borax, dairy and iodised salt, BHC and DDT. All tests were carried out in a constant temperature room at 78°F. and 32% R.H. With the exception of one series in which there were two replications per treatment, all were replicated three times. Wheat used was drawn from a bag of Ceresan-treated certified Mother Fife Tuscan with an official germination of 98%.

Results showed that copper sulphate was the most effective with 100% mortality in 24 hours, and a subsequent wheat germination of 75% in 14 days; metaldehyde was next with 100% kill in 24 hours and a germination of 70% in 14 days. Paris Green gave 100% kill in 4 days with a germination of 60% in 14 days. All other materials were unsatisfactory. To make the experiment comparable with farm conditions a straight out comparison between treatments and control was desirable. Therefore the germination tests were carried out on the seed remaining after the 7-day test period after slugs were removed. The grains were left for another 7 days. Hence in the control where slugs had eaten the embryos of the wheat the germination was nil.

From a practical farm scale point of view the metaldehyde is the best slug controlling agent since copper sulphate—unless the dosage is very carefully regulated—can inhibit germination almost completely.

J. W. CLELAND,
E.R.S., Ashburton,
11/2/52.

RECORD OF AN OCCURRENCE OF POTATO TUBER MOTH (*Gnorimoschema operculella* Zell.) DAMAGING TOMATO FRUITS.

Reference to the literature on the subject indicates that the Potato Tuber Moth (**G. operculella** Zell.) is frequently mentioned as a pest of other members of the family Solanaceae. Almost all text book references mention this insect as a pest of tomatoes, but none indicates the actual mode of inflicting damage. It is therefore, thought worthwhile to record this case, indicating the exact nature of the damage observed.

On 13th February, 1950, a field of potatoes in which the writer was interested was observed to have damage, in tubers, of the type usually associated with this pest. Larvae were recovered and reared to adult stage.

On 1st March, 1950, in an adjacent garden, fruits of tomato (var.: "Pride of the Garden") were found to contain larvae when being cut up for consumption. Close examination of fruits still on the plant, showed that larvae were present in almost all cases. The only external evidence of damage in individual fruits was small holes beneath the shelter of the calyx. It seems likely that eggs had been laid here and the holes were made by the entry of young larvae, since dissection of stems and examination of leaves failed to reveal damage of any type likely to be associated with this pest.

We are indebted to Mr. J. S. Timlin, Entomological Research Station, Nelson, who was working on this insect as a pest of tobacco at the time, for confirmation of identification of both larval and adult forms.

A. D. LOWE,
E.R.S., Ashburton,
11/2/52.

SUBMERGENCE OF A STREAM-SIDE WETA (*Paraneonetus* sp.).

During a collecting trip at Mt. Egmont in November, 1951, Dr. Woodward and the writer noted an interesting behaviour of a stream-side weta (**Paraneonetus** sp.). While we were working along the Manganui Stream, which is lined in places by banks of silt, pebbles and boulders, a stone was dislodged about two feet from running water, at about water level, and a small weta leapt out toward the water. On reaching the water, it ran out against the slowly swirling surface and moved down the vertical face of a boulder, to two inches below water level on the down-stream side. It remained facing vertically down the rock for several minutes until I captured it in that position.

Later, another was disturbed in a similar situation further down-stream. It immediately ran to the water surface, which was this time quiet, and moved down a rock side, as the earlier one had, and to the same depth under water. It remained in this position for ten and a half minutes, then moved to the side of another rock at the same depth, now remaining in a horizontal position. The antennae were held over the back, and the whole body was covered with a thin air film carried by the fine hairs covering the integument. After 23 minutes without movement, it moved up the side of the rock out of the water and stopped just above water level. After several minutes in this position it was captured.

Both animals leapt to the water and submerged without hesitation, the whole of this action occurring in a very short time, while, once submerged, both remained quite motionless for a prolonged period. They were not easily seen against the background of the submerged rock, in spite of the silvering effect of the surrounding air layer. The impression gained is that they were exhibiting a stereotyped behaviour pattern, in response to disturbance, presumably common to members of this species and perhaps also to other species of stream-side wetas. The behaviour is somewhat reminiscent of the submergence in pools of some species of pygmy locusts (Tettigidae).

The specimens were later determined as belonging to an apparently undescribed species of **Paraneonetus** Salmon (Stenopelmatidae; Dolichopodinae), agreeing with the description of the genus but not of the type species, **P. multispinus**, from the Three Kings (Salmon, J. T., 1948, Rec. Auck. Inst. Mus., Vol. 3, Nos. 4 & 5, pp. 305-307). Both were apparently adult females. For future reference, a specimen is to be deposited in the Auckland Museum, with an attached label referring briefly to the behaviour and to this note.

J. S. EDWARDS,
Auckland,
21/2/52.

TWO BRACONID PARASITES OF CLOTHES MOTHS.

In the course of a survey of the species of clothes moths occurring in New Zealand, two species of larval parasites were found. They were **Chremylus rubiginosus** (Nees.) and **Apanteles carpatus** Say. (Hymenoptera: Braconidae).

C. rubiginosus was bred in August, 1948, from larvae of the case-bearing clothes moth (**Tinaea pellionella** (L.)) collected from carpets in Auckland. The female parasites were 2 mm. long and the males were somewhat smaller. This parasite has been recorded from a variety of insect hosts (including **T. pellionella**) in Europe and U.S.A.

Apanteles carpatus was bred in November, 1948, from **Tinaea pellionella** larvae. Further specimens were obtained between November, 1948, and June, 1949, from an old coat from Te Awamutu which was heavily infested with the tapestry moth (**Trichophaga tapetzella** (L.)) together with a few brown house moths (**Hofmannophila pseudospretella** (Stainton)). As far as could be ascertained the parasites were associated only with **T. tapetzella** larvae. In the laboratory **A. carpatus** adults were observed to attack and oviposit in larvae of **T. tapetzella** but not eggs or pupae. Larvae of **T. pellionella** and the webbing clothes moth (**Tineola bisselliella** (Hum.)) were also attacked, though no **A. carpatus** were bred from field-collected larvae of the latter species. **Apanteles** adults were observed to oviposit through the larval cases of **T. pellionella** but in general they appeared to prefer to wait until the larvae emerged from their cases and then lay directly into their bodies. Adults of **A. carpatus** are considerably larger (female length 4 mm.) than those of **C. rubiginosus.**

A. carpatus has been recorded as a parasite of **Tinaea pellionella** in U.S.A. and Japan; as a parasite of **Tineola bisselliella** in Canada and Switzerland; and as a parasite of **Trichophaga tapetzella** in U.S.A.

K. P. LAMB,
P.D.D., Auckland,
27/2/52.

THE OCCURRENCE OF *Hydrometra ribesci* Hungerford IN NEW ZEALAND (Heteroptera : Hydrometridae)

This species, kindly identified by Dr. W. E. China, of the British Museum (Nat. Hist.), London, is the only member of the family Hydrometridae (slender water striders) yet to be recorded from New Zealand. It is known to occur also in Australia, New Caledonia and the Society Islands (Tahiti Is. and Papeari).

H. ribesci is described by Hungerford (1938) in Pan-Pacific Entomologist, 14 (2) :81-83. The colour varies from yellowish brown to dark brown. Hungerford gives the length of the Australian and New Caledonian specimens as 8.5-11.1 mm., with the females longer than the males, and the specimens from the Society Islands slightly smaller. Apart from the usual differences in the terminal segments, the males of this species differ from the females in having a pair of backwardly directed spine-like processes on the front of the sixth visible abdominal sternite, and behind these, on the same sternite, a pair of hair tufts.

For most of the specimens examined I am indebted to gifts and loans from Dr. R. A. Cumber, of the Entomological Research Station, Nelson.

6 males, 4 females; Kaikohe, North Auckland, rushes at edge of swamp, 12/8/50 (R. A. Cumber). All these specimens are dark brown above. Length: males, 8.0-8.25 mm.; females, 8.4-9.75 mm.

1 female; pool in stream above Dyson's Beach, Parengarenga Harbour, North Auckland, 29/1/50 (T. E. Woodward). This specimen is straw brown in colour and 10.45 mm. in length.

Hungerford records both winged forms, with fully developed hemelytra leaving only the end of the last abdominal tergite exposed, and wingless forms, with minute hemelytra. All these New Zealand specimens examined are of the latter kind, with the hemelytra reduced to short narrow pads only about 1/3 as long as the metanotum and without veins.

T. E. WOODWARD,
Auckland University College,
28/2/52.

A RECENT OCCURRENCE OF THE CINNABAR MOTH (*Tyria jacobaeae* L.).

In December, 1951, a very striking moth was captured in Masterton by Mr. C. J. Chapman and was forwarded to me for identification. It is a specimen of **Tyria jacobaeae** L. The forewings (expansion 43 mm.) are blackish-grey with crimson markings (subcostal and dorsal streaks and two terminal spots), the hindwings are crimson with blackish-grey markings (costal streak, middle of termen, and cilia), while the head, thorax, and abdomen are black.

This species was introduced from England to combat ragwort (D. Miller, Control of Ragwort; Experimental Work with Cinnabar Moth N.Z. J. Sci. & Tech. XI 2, 112-119, 1929). Starvation tests were undertaken at Cawthron Institute, Nelson, and it was found that the only fool plants are ragwort, groundsel, and Cineraria. Liberation was commenced in 1929, the eggs being distributed in great numbers wherever ragwort occurred, but **Tyria** did not become established sufficiently to be an efficient control of the weed (D. Miller, Biological Control of Noxious Insects and Weeds in New Zealand, II Biological Control of Noxious Weeds N.Z. J. Sci. & Tech. XVIII 7, 581-584, 1936).

However, the presence of a large colony on the Waikato River near Hora Hora in 1940-41 (Cawthron Institute Annual Report 1940, p. 29, Cawthron Institute Annual Report 1941, p. 28) and the present occurrence at Masterton in the Wairarapa show that local colonies will survive in this country.

K. J. WISE,
P.D.D., Auckland,
29/2/52.

THE ORDER OF PROTURA IN NEW ZEALAND.

In Tillyards "Insects of Australia and New Zealand" he states that the order Protura has not been recorded in New Zealand, and although I have been informed that at least two other New Zealand entomologists have in the last two years come across specimens of Protura, as far as I know their finds have not been recorded.

The specimens were collected by Professor B. J. Marples with a Berlese funnel from a sample of moist soil taken from the Otago Museum garden. The material percolating through the funnel was of interest as it was seething with Tardigrades, all vigorously attacking Nematodes that had come down with them. Mixed up in the mêlée were some ten specimens of Protura. These proved to belong to the family Acerentomidae, in which the second and third abdominal appendages are single jointed.

G. H. SATCHELL,
Otago University,
27/3/52.

NOTE ON MAYFLY NYMPHS OCCURRING IN THE AUCKLAND DISTRICT.

In New Zealand the Order Ephemeroptera is represented by three families and altogether by twenty-two known species. Phillips (1930, T.N.Z.I., 61.) records **Deleatidium lillii** from Auckland streams. He also mentions his discovery of a new species of **Atalophlebia** from Hikurangi, North Auckland. Phillips described the larva of this species under the name **Atalophlebia borealis** which is thus a valid name. The author has likewise found a species of **Atalophlebia** possessing characters very similar to those of **A. borealis** Phillips. Fourteen species have been discovered in addition to those previously recorded from the Auckland district. The following is a list of the known Auckland species:—

Family: Ephemeridae:	**Ichthybotus hudsoni** (Eaton).
Family: Siphlonuridae:	**Globuriscus humeralis** (Walker).
	Oniscigaster distans Eaton.
	Ameletus ornatus (Eaton).
Family: Leptophlebiidae:	**Atalophlebia dentata** (Eaton).
	A. cruentata Hudson.
	A. nodularis (Eaton).
	A. borealis Phillips.
	A. versicolor Eaton.
	Deleatidium autumnale Phillips.
	D. cerinum Phillips.
	D. fumosum Phillips.
	D. Lillii (Walker).

D. vernale Phillips.
D. myzobranchia Phillips.
D. (Atalophlebiodes) sepia Phillips.
D. (Atalophlebiodes) cromwelli Phillips.

For the most part collecting has been confined to bushland streams of the Waitakere Ranges. However two creeks (Motions Ck. and Oakley Ck.) in a western suburb of Auckland have also been explored.

The occurrence of Mayfly nymphs is governed by such factors as type of stream bed (shingle or rock), and strength of the current. The typical Waitakere stream provides a variety of these conditions along its length, and so supports a representative collection of Ephemeroptera. From Motions and Oakley Creeks only two species have been observed, namely **Atalophlebia dentata** which occurs in abundance, and the not so common **Atalophlebia nodularis.**

G. C. HARD,
P.D.D., Auckland.

RANDOM NOTES.

Collembola.

The amphibious behaviour of several species of these insects, apparently isotomids, attracted attention on the marine littoral at Muriwai (Auckland West Coast) and Waiheke Is. (Auckland) in 1936, and on the East Coast of Coromandel Peninsula in January, 1939.

Those initial observations suggest that these insects can:—

1. remain under sea water for several hours;
2. withstand tidal conditions on the surf-swept coast;
3. if loosed into the water, remain unharmed for several hours, or skip over the surface;
4. remain also above high-tide mark;
5. probably find food and shelter among the algae and polychaete worms with which they are found.

Specimens in the writer's collection were obtained from surf-swept rocks on the tidal platform between the half-tide and low-tide marks at both the ebb and the flow of the tides.

Evidently collembola had remained under water on these rocks of which some had been submerged for more than six hours and some always under the wash of the waves.

A small cluster of the tubes of sedentary polychaete worms (**Sabellaria**?) was removed from the rocky substratum as the surf swept off them near low tide; and after it had been totally submerged for more than half an hour in sea-water, twenty-three specimens of collembola were collected from it as they moved between the sandy tubes.

Short, narrow glass vials submerged with their open ends upwards in a larger stoppered vial of sea-water retained air in which the included collembola remained.

Specimens of Collembola on the outside of such solid objects as a single wormtube, a piece of stick and the blade of a sheath knife, skipped across the water when lowered into it.

At these localities no evidence was noted that collembola migrate between the dry shore and the uncovered rocks as the tides ebb and flow.

Danaida melissa hamata. W.S.M.

It would appear to be worthwhile to record here that a specimen of this Australian nymphalid butterfly was captured while settled on a flower in the garden of a resident of Dargaville, North Auckland, on 1st February, 1941.

Mr. Hudson noted the first record of this butterfly's appearance in New Zealand as that of one taken on Kapiti Island on 23rd March, 1940. The Dargaville specimen appears therefore to be only the second to have been captured in New Zealand.

Ophideres materna L.

Two specimens of this "orange sucker" moth were captured flying to light near the Waipoua Forest, North Auckland, at 8 p.m. One on the 27th March, 1941, the other on 13th June of the same year.

This insect evidently had not been seen previously by settlers in this district; and as far as it is known it has not been taken there since.

Navomorpha sticticum (Broun).

Whereas **Navomorpha lineatum** (Fabr.) and **N. sulcatum** (Fabr.) may be beaten from forest foliage sometimes at Auckland, **N. sticticum** seems seldom to have been found anywhere. The first specimen was submitted by Mr. G. Munro of Clevedon, Auckland. The Munro brothers were assiduous collectors for the then Captain Broun who did not, however, record ecological details; and there is not now any record or recollection from which to complete the story of the type specimen of this beetle. Brief mention of a few other specimens taken singly was made by Mr. G. V. Hudson in 1934.

During January, 1949, this attractive beetle was found to be enjoying life to the full while the Nikaus **(Rhopalostylis sapida)** were flowering profusely in the Mangawai Gorge, North Auckland, where an interesting series of specimens was obtained.

The most active day for **N. sticticum** was 20th January, 1949, which was a fine, sunny, though humid day following a calm overcast mild night in which the season's largest night flight of insects seemed to be in progress near lamplight though in the forest between sunset and midnight only one specimen (of **Calliprason** at 11 p.m.) was obtained from the profuse flowers so well patronised during the day.

Associated with **N. sticticum** on Nikau flowers are found

1. the longicorns:	**Calliprason sinclairi** White
	Xuthodes punctipennis Pascoe
	Somatidia sp.;
2. the oedemerid:	**Thelyphassa lineata** (Fab.);
3. the clerid	**Phymatophaea electa** Pascoe;
4. the elaterid	**Metablax cinctiger** White;
5. the weevils	**Lasiorrhynchus barbicornis** (Fab.)
	Peristoreus trilobus (Pasc.)
	Nyxetes bidens (Fab.)
	Amylopterus prasinus Broun
	Ancistropterus quadrispinosus White
	Stephanorrhynchus tuberosus Broun;

and of course the ubiquitous

Scolopterus tetracanthus White, and
S. penicillatus White;

as well as unidentified specimens of apparently **Ancistropterus, Stephanorrhynchus,** and of Elateridae, Cistelidae, and other small beetles.

ERIC D. PRITCHARD,
2/2/52.

NOTES ON INSECTS

Pseudaletia separata (Walk.) (Lepidoptera, Noctuidae).

Franclement (Proc. Ent. Soc. Wash., 53, 2, pp. 57-85, 1951) has recently erected a new genus, **Pseudaletia,** in which he places **unipuncta** (Haw.). The species ranging from Japan and China to New Zealand, previously known as **Cirphis unipuncta** Haw., he shows to be Walker's species **separata** which he places in **Pseudaletia.** An examination of the male genitalia of specimens reared or in collections in New Zealand shows that our species should now be known as **P. Separata** (Walk.).

Pharmacus montanus De Saussure (Orthoptera).

This insect is known as the Mt. Cook Flea, but would be better called the Snow Weta. First collected by G. E. Mannering and described by De Saussure in Switzerland, the insect has received little later attention. It occurs at times in considerable aggregations on the rocks on the high mountain ridges, often well above the glaciers and in the apparent absence of vegetation. I have seen it on the Wilkin Divide (Otago), on Mt. Malte Brun (Central Alps) and on Mt. Mahanga in the Spenser Mts., in all cases at an altitude of about 7000 feet. A shower of them may jump off the rocks as one passes. Their food remains a mystery, although examination of faecal pellets from a specimen from Mt. Mahanga suggested that insect flotsam and jetsam on the snow may form at least part of the diet.

Bothrideres obsoletus Broun (Coleoptera, Colydidae).

In rearing specimens of the longhorn beetle **Tetrorea cilipes** White, ectoparisitic larvae were found feeding on the pupae. These on completion of feeding spun close-textured, buff coloured, hemispherical cocoons or cells from which **B. obsoletus** emerged. Species of the same genus overseas are known to have a similar parasitic habit, which is a rather unsual one in the Coleoptera.

L. J. DUMBLETON,
E.R.S., Nelson,
19/5/52.

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Contents

Page.

Harrison, R. A.: A Rare New Zealand Species of Diptera (**Sciodocera rufomaculata** White) 3

Wise, K. J.: Note on the Occurrence of **Parectopa miniella** Feld. (Lep., Tinaeidae) 3

Kelsey, J. M.: New Zealand Grown Pinus and Insect Attack 4

Hoy, J. M.: Note on the Occurrence of Nematodes in Larvae of **Odontria zealandica** White 5

Cleland, J. W.: Slug Control 6

Lowe, A. D.: Record of an Occurrence of the Potato Tuber Moth (**Gnorimoschema operculella** Zell.) Damaging Tomato Fruits 7

Edwards, J. S.: Submergence of a Stream-side Weta (**Paranconetus sp.**) 7

Lamb, K. P.: Two Braconid Parasites of Clothes Moths 8

Woodward, T. E.: The Occurrence of **Hydrometra ribesci** Hungerford in New Zealand (Heteroptera : Hydrometridae) 9

Wise, K. J.: A Recent Occurrence of the Cinnabar Moth (**Tyria jacobaeae** L.) 10

Satchell, G. H.: The Order Protura in New Zealand 11

Hard, G. C.: Note on Mayfly Nymphs Occurring in the Auckland District 11

Pritchard, E. D.: Random Notes (Collembola, **Danaida melissa hamata, Ophideres materna** L., **Navomorpha sticticum** (Broun)) 12

Dumbleton, L. J.: Notes on Insects (**Pseudaletia separata** (Walk.), **Pharmacus montanus** Sauss., **Bothrideres obsoletus** Broun) 14